Exceptional CHILDREN

JOURNAL OF THE INTERNATIONAL COUNCIL FOR EXCEPTIONAL CHILDREN

Journal of Exceptional Children.

MANHATTAN KANSAS STATE COLLEGE
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Exceptional CHILDREN

JOURNAL OF THE INTERNATIONAL COUNCIL FOR EXCEPTIONAL CHILDREN

The Council is a Department of the National Education Association of the United States
1201 16th St. N. W., Washington 6, D. C., U. S. A.

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ACTIVE MEMBERSHIP is primarily of two types: sustaining, $5 or more, and regular, $4—of which $1.75 is for **Exceptional Children** and 25c for the **ICEC Bulletin**. Twenty months subscription, to new members only, for $6, beginning with the February 1, 1954, issue. Student rates on request.

LIBRARY AND ORGANIZATION RATES for Exceptional Children only, without membership, $3 per year. Obtainable direct or through NEA Library Subscription Plan.

FREQUENCY OF ISSUE: Monthly, Oct.-May. Entered at the post office at Washington, D. C., as second-class matter under the Act of March 3, 1879; postoffice of second entry, Butler, Ind. Accepted in the mails under the rates of postage as provided in Section 34.40(e), Postal Laws and Regulations, Act of October 30, 1951. All articles herein are personal expressions, which do not necessarily constitute Council policy unless set forth by resolution. Indexed by the Educational Index. Abstracted by Psychological Abstracts. Member of the Educational Press Association of America. Change-of-address notice is required five weeks in advance.

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SINGLE COPIES 40c

MANUSCRIPTS for publication and books for review should be sent to the editor; news items to the assistant to the executive editor. Items for "Out of the Classroom" should be sent to Jo Kelly, supervisor of special education, Fort Worth, Texas, or Marguerite Rapson, principal, Gorman School, Dayton, Ohio.

MAY ISSUE INCLUDES:

* Two rehabiliattion projects for better community relationships,
* Possible delinquency prediction for prevention.
* Measuring educational programs in decibels,
* The special teacher's responsibility for the literature,
* Can we change our society's attitude toward the handicapped?

PRINTED IN U.S.A.

Relationship of Research and Education

IN A NATIONAL PROGRAM FOR HANDICAPPED CHILDREN

PEARCE BAILEY

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THE National Institute of Neurological Diseases and Blindness is one of seven National Institutes of Health of the Public Health Service. It is the primary government agency concerned with the scientific attack on some of the disorders which concern your organization. Established by Congress in 1951, the Institute conducts research and, through grants-in-aid, helps support scientific investigations at universities and other institutions into cerebral palsy, epilepsy, multiple sclerosis, cerebral vascular disease, aphasia, and the various conditions which cause blindness and deafness.

At present, approximately one-third of all studies conducted in these fields are supported by Institute funds.

You may not be familiar with the fact that a broad research attack on the neurological and sensory disorders is now being conducted in many laboratories throughout the land. The necessities and obligations of specialization make it difficult for us to follow developments in related fields. While the author is familiar with much progress made in the rehabilitation and education of exceptional children and adults, he has not known until recently of the unified and dynamic approach to these problems which characterize your efforts.

The relationship between the scientific mission and the educational one which ICEC represents is not always clear. It is interesting to note in passing that the growth of services for the exceptional child has been paralleled in the past decade by the growth of research devoted to the prevention, diagnosis, and treatment of the disorders which demand these services. There can be little doubt that public sentiment and private initiative have been responsible for seeing that both the present care of the disabled patient and his future cure should finally receive attention somewhat commensurate to the need.

These parallel developments meet only rarely at present—but there is good reason to believe that as the knowledge concerning these disorders grow, so will the interrelationships. The development of rehabilitation is a case in point. Rehabilitation is not a single scientific achievement in itself, but a practical correlation of scientific information achieved in several fields. Knowledge of nerves, muscles, bones, and mental processes by the neurologist, orthopedist, psychiatrist, physical and speech therapists; knowledge of both mental and physical factors in relation to the market place by both occupational therapist and vocational

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counselor—all of these combine to complete the comprehensive picture which is total rehabilitation.

The final chapter in the evaluation of rehabilitation procedures has by no means been written. We who do scientific research hope that our studies of the central nervous system in general, and our investigation of nervous system disorders in particular, will find application in your work. Your work, of course, is a testing ground for ours and your findings will, thereby, also condition our future research.

The Common Goals

Our aim—yours and mine—is, of course, to finally eliminate blindness, deafness, cerebral palsy, epilepsy, multiple sclerosis, cerebral vascular disease, and other disorders which create the exceptional child. Science must take the initiative here and a wide variety of studies are now under way in which the signs of progress towards this goal are already implicit, if not actually evident.

The problems facing science in the attack on neurological and sensory disorders are not simple ones. When we speak of cerebral palsy, epilepsy, and hemiplegia, for example, we are referring to symptoms due to various types of damage to the brain. While we think of the brain as a single organ, it is composed of approximately four billion nerve cells, each of which in combination with other cells mediate all our actions, movements, thinking, talking, seeing, and even breathing.

How these cells function, what chemistry is responsible for their creation of electrical energy, how the patterns of electrical energy form as they travel along the multitudinous nerve circuits, how nerve fiber activates muscle, and how nerve fibers reach their inevitable positions in the body are but a few questions which scientists are trying to answer concerning the special universe of the brain.

The answers to all these questions are far off in time. This is no cause for despair, however, for it is clear that insofar as we are concerned with disease, we are likely to develop controls before we fully understand causes or basic mechanisms. The answer to one question concerning the nature of the central nervous system may, therefore, provide the lucky solution for several disorders; and our direct work on various conditions must, by systematic "trial or error," also prove fruitful.

For example, at Bethesda we feel that we are working on something which will be of singular importance eventually in the treatment of those disorders caused by permanent, irrevocable injury to nerve cells. In this category fall the cerebral palsies, the paraplegias and hemiplegias, and those injuries to the nerves of the eye and ear which eventually cause loss of function.

Regeneration of Nerve Tissues?

The nerve cell is extremely sensitive. If the human heart, for example, stops beating on the operating table, it is possible to revive it some time later and it is none the worse for wear. But the moments when the heart stops beating are of extraordinary import to the patient, for once the flow of blood and oxygen from the heart have ceased providing their energy to the brain, the cells of the brain begin to die. Deprived of nourishment for just four to six minutes, enough cells in the brain will have been destroyed so as to render the patient a hopeless cripple.

Can we reverse this process? Science has been saying "No" to this question for generations, "destroyed nerve tissue

alone of the tissues of the body cannot regenerate." Yet, today, as a result of work performed in the laboratory just a few years ago, there is good reason to believe we have found the basis for a rebuttal to this classical proposition.

It is interesting to note that the investigators who reported evidence of nerve regeneration were not working on that problem at the time they made their findings. They were performing some rather routine experiments with a dead bacterial agent with heat-producing properties; in trying to ascertain the mechanism of this heat-producing action on the nervous system they were injecting the substance into various bodily areas of cats whose spinal cords had been severed.

Those cats were autopsied, and on autopsy the investigators found something that had never been found before: the nerve fibers had grown across the severed spinal cord and they were capable of carrying nerve impulses. They were later to determine that the substance which had been injected had prevented the formation of scar tissue at the places of severance and that this scar tissue ordinarily created a dense barrier through which the nerve ends could not grow together. It is this scar tissue on the brain and spinal cord which in human neurological disorders prevents the nerve implses from traveling to the muscles which directly activate the movement of arms, legs, tongue, neck, jaw, and even the lungs.

The limitations of this happy discovery were quickly ascertained. Continued administration of the heat-producing bacterial agent only resulted in a minimum of functional restitution in the cat. The cat, in short, could not really move. Administration of the substance to persons suffering nerve injury disorders brought in a number of encouraging results, but a large majority of negatives. Yet, discouraging as these facts seemed to be in terms of an immediate therapy, one fact of overwhelming importance emerged, that there is a good probability that nerve tissue can be regenerated, and eventually we are going to have to revise our medical texts to this effect.

The senior investigator who made this discovery is continuing his research in our laboratories at Bethesda. Whether we shall some time find a single agent which by some simple application can truly regenerate the dead nerve cell, it would be impossible to say. Prior to that time, we might well envision the development of various selective agents which through partial regeneration might facilitate the processes of rehabilitation and re-education with which you are most concerned.

Surgery Opens the Door to Research

Our research successes, of course, may derive from a variety of approaches. Much study is being devoted to the nervous system as a whole without consideration of its immediate application to neurological and sensory disorders. One scientist may study the axone of the giant squid, another the metabolism of oxygen and glucose in the creation of energy for the brain; still another the electrical output of a single microscopic nerve cell. This general, fundamental information, while it does not provide us with the therapeutic materials we are seeking, becomes part of that vast accumulation of data which other scientists draw on in their more direct attempts to resolve our mutual medical problems.

This more direct attack is illustrated in some other work we are conducting at Bethesda. At the new Clinical

Center, we are now admitting patients who suffer from psychomotor seizure, a condition which, during the attack, is characterized by general aimlessness, disorientation, and amnesia. In many instances anti-seizure drugs cannot benefit this condition, and our patients are such sufferers. It has been found that excision of the damaged nerve tissue apparently responsible for this form of epilepsy can afford control of symptoms in a large majority of cases, and we are performing this operation at the Clinical Center.

We are primarily concerned with research. We are performing this surgical procedure, therefore, in order to develop new clinical procedures and instruments which will increase the efficacy of this mode of treatment. But this operation also permits some very special opportunities for other research. The investigations should prove of great interest and potential value not only to epileptics but to other neurological sufferers.

The damaged nerve tissue which is excised is turned over to the neurochemist, and it is subjected to extensive chemical analysis. Evidence presented in recent years indicates that the metabolism of epileptic tissue differs from that of normal tissue. In epileptic tissue we do not find as much of an important substance called acetylcholine formed in reserve. In addition, glutamic acid is not present in normal quantities. We are examining these findings further and are also looking for other metabolic abnormalities. What is yielded here in the nature of the basic biochemical causes of seizure will then be made available to other of our specialists to aid in the development of new medications which may prove superior to drugs now in use or which may prove effective in the control of seizures not now amenable to any therapy.

The operation itself gives us a very special opportunity to increase our basic understanding of the brain—especially of that last frontier of the cerebrum, the temporal lobe. Now just about a year and a half has passed since Dr. Wilder Penfield of the Montreal Neurological Institute reported evidence to indicate that the temporal lobe played a major role in the function of memory. Our investigators are now concerned with following up this preliminary finding.

Very broadly speaking, the method used in this investigation consists of stimulating the temporal lobe with an electrode conducting a low electrical current. Since the brain itself is completely insensitive, we can do this without causing the patient pain and the patient can, moreover, under local anesthesia, respond to questioning by the team of investigators who are concerned with this procedure. When a stimulus is applied to the various areas of the temporal lobe, we try to ascertain whether such stimuli produce spontaneous memories, and indeed they do in some areas. Restimulation of certain areas, moreover, reproduces the same memories, frequently with a further accumulation of detail.

So far we do not know whether half the temporal lobe, or if so, which half dominates the process of recording experience. Certain evidence might indicate that the entire surface of the temporal lobe is involved and we are trying to find evidence of a nerve pathway or pathways and the internal or external connections which are responsible for the various aspects of the memory processes.

We are just at a preliminary stage in this process of cortical mapping.

Where this investigation can lead us to, no one can say, but the possibilities for the far future in finding the physiological basis of such functions as recall, association, and indeed the entire learning process certainly exist. No one can fail to see the opportunities which may lie before us in this work. Its application to the problems with which you are primarily concerned is also evident.

The operative procedure is the focus, as well, for other studies we are conducting. You will be interested to know that a clinical psychologist has an integral role to play in this study of memory function. He is responsible for evaluation of the epileptic both prior to and after the operation, and he utilizes many of the tests which are part of the educational reportory—the Wechsler Memory Scale, the Rorschach, and the Bender-Gestalt. To satisfactorily determine what, if any, personality changes occur after excision of the diseased area of the temporal lobe, these tests are repeated three weeks, three months, six months, and one year after the operation. In addition we are trying to develop new tests which can more accurately meet the needs of the new biopsychology which may be in the making.

I have reviewed our own research work on the brain at some length because it seems to me to bear very closely on the work many of you are doing. The problem of sensory deficiencies among exceptional children is a large one, and while our methods of dealing with sensory losses has vastly improved within the past decade, we all may envisage a sharpening of our techniques to both speed and perfect the processes of re-education and rehabilitation.

It is almost fantasy at this time to speak of finding the biological basis for such functions as perception, learning, and memory. Yet this is what we and a handful of other scientists are attempting to do. It is clear that even if we should be able to place our feet on the threshold, many years of work lie ahead of us before we become intimate with the whole house. In this work, those already concerned with problems of psychodynamics must play an invaluable role. The complex correlations of behavior with the activity of the brain must depend in good part on those who are already working very closely with various aspects of the mind and personality. Research, education, and rehabilitation may here have an exceptional opportunity to work hand in hand.

It is my hope that in this area, and in others, your organization and mine will be able to bring together our mutual facilities and talents for the greater happiness of the exceptional child and others who suffer from the neurological and sensory disorders.

If a child become sick—with pneumonia or scarlet fever, or polio—he can, in most parts of the country, get medical help within a matter of hours. But if that same child should become mentally ill, where can he go for help?

To a doctor? In the great majority of towns his parents would be unable to find even a single psychiatrist.

To a psychiatric clinic? In the entire country there are no more than 500, most with long waiting lists.

To a mental hospital? Only a handful of mental hospitals in the country have separate accommodations for mentally sick children.

The National Assn for Mental Health is waging a campaign to remedy these conditions—fighting for a better chance for all of us—should mental illness strike.

Protect your family against mental illness —Give to the Mental Health Fund.

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our Selves and Society

LEWIS M. KILLIAN

WE are living and teaching in a time when the word "social" has become suspect in many quarters. Even the title "social scientist" suggests to many people who don't quite understand it, other words which they do understand and dislike—"socialization," or "socialism." What I wish to talk about today, as a social psychologist, is not a political and economic system or philosophy, nor something limited to any particular society or any specific period in history. It is the social nature of man—indeed, the most private and individual aspect of man, his very *self*. I have chosen to talk about this because I fear that the concept, "social" in its richest and truest sense, may be lost in the shuffle arising from our desire to repudiate collectivism and espouse individualism.

We are all familiar with the ancient and meaningless question, "Which is more important, heredity or environment?" Equally old and meaningless is the question, "Which is more important, the individual or society?" This is like asking, "Which is the more important side of a coin, heads or tails?" —an analogy often used to show that the individual and the group are but the two faces of the same thing, the two sides of the coin of social reality.

One of the clearest expressions of this idea was set down in writing around the turn of the century, and even then it was merely the restatement of an old but oft forgotten principle. Yet because such principles are so often forgotten in the heat of controversy and the stress of adjustment to a complex world, it is well that we should stop to reconsider them.

In doing so, I want to recall the works of some social psychologists whose names are little known to the general public but are bywords with sociologists and social psychologists —Charles H. Cooley and George Herbert Mead. Much of what is good in modern social psychology is but a refinement of ideas expressed many years ago by these brilliant thinkers.

Then I want to point out certain

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implications of these ideas for the classroom teacher—whether he teaches kindergarten or university students, normal or exceptional children. The implications fall under two headings: those relating to the personal influence exerted by the teacher on the pupil, and those relating to the content of the material which the teacher attempts to convey.

The central theme is that the salient feature distinguishing man from lower animals is that he has a self or an ego, and that this self is essentially social. Mead gave a succinct definition of self as "a subject which is its own object." (3,p.136) This cryptic definition implies that which is distinctive, psychologically, about the human being. He *thinks* about his own actions, judges them and regulates them, and does not, in most of his behavior, simply react uncritically to his environment. But how, from what vantage point, does he judge his actions? From the vantage point, we say, of *others,* of the groups about whose opinions he cares. He only imagines what the judgments of others will be, and often he imagines incorrectly. Sometimes he may wish to please those whose judgments he imagines. At other times, he may wish to offend or shock them, so that his actions are called "anti-social." This is well illustrated by the remarks of the naughty boy who says to his comrades, "Boy, suppose Mom could see me now!" Imagining the chagrin of the disapproving parent may add to the zest of the offense.

The Looking-glass Self

Cooley expressed his idea of the social nature of the individual self in his famous concept, "the looking-glass self." Other people and their responses to us are, he suggested, mirrors from which we get our conceptions of ourselves and by which we judge our own actions.

It is fairly easy to dissuade ourselves from the notion implicit in collectivist philosophies that groups, such as the state, somehow have an existence and a virtue apart from the interacting personalities of the individuals who compose them. It is somewhat more difficult, however, for us to grasp the notion that individuality is, in itself, social, the uniqueness of each individual representing only a unique constellation of hereditary and social influences interacting with each other in the particular person. We can grasp this better if we consider, for a moment, the genetic development of self in the individual. So central in this development are social influences that we call the process *socialization.*

The individual, we say, is not born with a self, meaning that at birth he is incapable of making judgments on his own actions, of regulating his actions in terms of these judgments, and, indeed, of even thinking. Man is not born social. These things are learned, and are learned in social context. In fact, our very consciousness of self, of our existence as a physical and psychological entity separate and distinct from the world around us, is learned, and is learned from others. We become conscious of ourselves as individuals and as particular kinds of individuals only as we preceive the responses of others to us.

We might say that the process of socialization is essentially a process of self-definition, of learning who we are and how we should act to be such a person. These self-definitions the developing child gets from others—from parents, siblings, playmates and teach-

ers, How much of parental admonition involves definitions: "You're Momma's good boy—now act like a good boy!" or "Let's show that you can be a little lady now!" or "You're a big boy now and big boys don't cry." As the child grows older he comes under successive social influences which combine to alter his self-conceptions—instead of being "mamma's good little boy" he begins to learn how to be "one of the gang." In the words of a modern social psychologist, Muzafer Sherif, he acquires new reference groups and regulates his standards and aspirations in relation to these groups. (4)

It is important to recognize that these social influences, or norms, are not superficial, external bonds imposed upon some innate, real self which somehow is not social. It was against this artificial separation of the individual and the social that Cooley protested when he said:

> Just as there is no society or group that is not a collective view of persons, so there is no individual who may not be regarded as a particular view of his social groups. He has no separate existence; through both the hereditary and the social factors in his life a man is bound into the whole of which he is a member, and to consider him apart from it is quite as artificial as to consider society apart from individuals. (1,p.3)

We See Ourselves Through Other's Eyes

Social influences are not merely coated on the developing self like so many layers of paint which can be stripped off later. Rather, they are incorporated into the self, forming a synthesis which is something new, something social, and yet something individual, in that it is unique to the particular person in which this configuration of attitudes is found. The attitudes, norms, and values, though they are social in derivation become the property of the individual—a part of his self. It is this that makes the group so dependent upon the individuals who compose it for its influence and its very existence, for only insofar as they share the same norms and values do individuals constitute a group. At the same time, it is because of this that, Mead said, "Self-criticism is essentially social criticism, and behavior controlled by self-criticism is essentially behavior controlled socially." (3,p:255) This is why we say, following Cooley, that the individual and society are merely "the distributive and the collective aspects of the same thing," the individual having his psychological existence only as a member of the group, and the group having its reality only in the interaction of the individuals who compose it.

Influence of the Teacher on the Pupil

Now let us consider the implications of this view of human nature for the classroom teacher. One wonders if any of us are constantly mindful of the fact that we are not merely putting another coat of knowledge on a human structure which is already completely formed. No, we are wittingly or unwittingly moulding personalities, helping to define the ever-emerging selves of our students. While the nature of the interpersonal relation between teacher and pupil is of critical importance in determining how well the knowledge we attempt to impart will stick, far more than this is at stake. We are, perforce, helping each of these young people to define himself as a person who is good or bad, competent or inferior, trustworthy or one who has to be watched, a person who can set his sights high or one who always will just "get by." This is particularly true

because of the prestige which the teacher bears by virtue of his position of leadership and authority. As Cooley said:

> In the presence of one whom we feel to be of importance there is a tendency to enter into and adopt, by sympathy, his judgment of ourself, to put a new value on ideas and purposes, to recast life in his image. (1,p.175)

The ways in which teachers influence the self-attitudes of pupils are countless and subtle. I might give just one amusing but perhaps not insignificant example. In talking to teachers in many parts of the country, I have been interested to see how widespread and standard is the expression used by grade-school teachers, "My big boys." I am convinced that no school term could be completed successfully without the aid of these everpresent, always willing, and infinitely versatile "big boys." And I have often thought, "What ego-gratification a four and half foot, nine year old boy must get when he is dubbed one of teacher's 'big boys,' and how frustrating it must be to a boy to go through several grades without receiving this accolade. How *small* it must make him feel!"

What must be the self-conceptions of exceptional children, due to definitions given them by parents, siblings, playmates, and even strangers who make unkind remarks? How much do these self-conceptions handicap them in their learning and in their social adjustment? The answers to these questions must be fully as important as all the answers we can get with batteries of intelligence tests. It reminds me of a rather tragic episode which I witnessed in the army. One Sunday afternoon as I walked down the company street I met Willie, one of our retarded trainees, and his father who was visiting him that day. During our conversation I attempted to bolster Willie's ego and make his father feel good by telling him how well his son was coming along. But the father replied, in the son's hearing, mind you, "Willie ain't never been right bright. His mother was marked before he was born, and he always has been kind of backward." Now there's no doubt that Willie suffered a definite mental handicap. But when I thought of how many times he must have heard the statement, "Willie ain't right bright," I wondered what sort of motivation, of level of aspiration, of self-confidence he could have.

The work of the teacher in helping the student develop the type of self-attitudes which will aid, not handicap, him is not just an incidental, additional duty, nor an accidental byproduct of the task of transmitting facts and skills. It is a major part of the task of the teacher, and one that should be undertaken consciously and conscientiously. This is as true for the teacher of normal children as for the teacher of exceptional children, for the college professor as for the grade school teacher. It is an unavoidable task. *If we do not do it well, we will do it poorly, but we shall surely do it.*

Implications for the Content of Teaching

What are the implications of this theory of human nature for the content of what we teach, particularly in the social studies? This is a time when teachers at all levels are, with no little justification, concerned about what they may, with propriety and impunity, teach their pupils about the relationship between society and the individual. We fear that we may be accused of implanting a collectivistic philosophy in young minds, of leading them to believe that the group is the source of

all good, the best judge of what is right, and the rightful recipient of all our highest loyalties. I fear that some teachers may have inadvertently fostered such ideas. In an era of social consciousness, of reaction against selfish individualism, and of increasing political and economic complexity, it has been easy to imply that the individual counts for little, to disparage individual achievement and self-assertion as vain, selfish, and anti-social. Our belated awakening to the pervasiveness of group influences on individual behavior has led many well-intentioned people into an unsound social determinism. This, I repeat, is as unsound as the sort of thinking which disregards social influences and explains individual behavior solely in terms of innate characteristics.

I have elaborated at some length on the social nature of the individual, on the influence of the group upon his self and on his every conscious act. But still it is the individuals who think, who act, who make choices. It is through individuals that social forces are translated into action, and the group from which these social forces emanate is, in the last analysis, a collection of interdependent, interacting, more or less similar individuals. What we must teach then, is not the self-sufficiency of the individual, not the unimportance of the individual. It is the interdependence of individuals as social beings. Whenever I hear a person boast that he is a rugged individualist, I think, "Here is a man who acknowledges neither his indebtedness nor his responsibility to his fellow man." To teach a consciousness of the truly social nature of man does not mean that we must encourage maudlin sentimentality, uncritical subservience to the state or any other group, nor any form of determinism which totally relieves the person of responsibility for his actions. Nor are we called upon to propound specific solutions to the problems of our social order. But we would be remiss if we did not emphasize to our students that these problems, no matter how remote they may seem to us, are matters of grave importance to each and every individual.

If the nature of the group of other persons is of such importance to the developing self of the individual, we cannot afford to neglect the problems which affect our group or any individual in it, no matter how lowly or insignificant he may seem to us. Yet I fear that the greatest threat to our freedom is not alien rifles and A-bombs, nor deliberate subversion from within, but the apathy, the narrow self-concern of the majority of the American people. Never has John Donne's familiar thesis been more pertinent than it is today—"Any man's death diminishes me, because I am involved in Mankinde; and therefore never send to know for whom the bell tolls; It tolls for thee."

Finally, while we must teach a social consciousness which will make for unselfish social responsibility, we must also teach individualism, but an individualism which is unselfish and is not, paradoxically, totalitarianism masquerading as anti-totalitarianism. Too often when we think of freedom we think only of freedom for *me* and those who agree with me. A truly intelligent individualism is one which places high value not just on *my rights* as an individual, but on the rights of others. The great philosopher and psychologist, William James, expressed well the importance of this unselfish type of individualism when he said:

(Continued on page 304)

ORTHOPEDIC ASPECTS OF CEREBRAL PALSY

SAMUEL B. THOMPSON

MOST of you are familiar with the Hindu fable of the blind men who were confronted with an elephant and gave their individual descriptions of it. As you know, one felt of his tail and described the elephant as being much like a rope. Another felt of his leg and reported the elephant as being much like a tree trunk. Another felt of his side and reported him to be much like a door. In going through my cerebral palsy files, the similarity of our discussions of cerebral palsy, and the reports of the blind men of India on the elephant, is quite striking. I found there papers on the medical aspects of cerebral palsy, the pediatric aspects, the neurological aspects, the educational aspects, the psychological aspects, and the speech aspects, as well as numerous papers on the orthopedic aspects.

Nevertheless, if enough blind men had examined the different aspects of this elephant, and all of their reports had been correlated, one would have come up with a rather accurate description of the elephant. It follows that we may eventually get a fairly accurate picture of cerebral palsy, even though we continue to approach it in the light of our own interests and knowledge. The question immediately arises as to the value of looking at cerebral palsy through the eyes of an orthopedist, when one's chief object is to educate its victims. There are two reasons: (1) It is necessary to have all of the aspects described to get the complete picture, and (2) Some of the orthopedic characteristics of this condition are of importance to those who try to educate these handicapped children.

Orthopedic surgery has to do with the preservation and restoration of function, and the prevention and correction of deformity. Cerebral palsy has been defined as any motor handicap due to a lesion in the brain. Since a motor handicap interferes with function and may lead to deformity, the orthopedic surgeon has a very strong and legitimate interest in this condition.

The aim of our management is the aim of our specialty, as outlined above: the preservation and restoration of function, and the prevention and correction of deformity. Since such is our aim, our chief concern is with the motor aspects of the handicap, that is, the peripheral manifestations, such as the involvement of the control of the feet, legs, trunk, hands, and arms. We are perfectly aware that there are other manifestations of cerebral palsy, notably, the speech mechanism, but this is one field of motor function with which we ordinarily do not concern ourselves greatly. Likewise, the sensory disturbances such as involvement of hearing and vision and the intellectual disturbances, do not fall particularly into our domain. As individuals treating cerebral palsied patients we are frequently quite concerned with these

•The address above was delivered before the Winter Conference of the International Council for Exceptional Children at Houston, Texas, Dec. 30, 1953 by SAMUEL B. THOMPSON, M.D.

aspects of the problem, and many orthopedists interest themselves extensively in these phases of the difficulty. However, technically speaking, as orthopedists our chief concern is locomotion and hand use.

Definitions

A great deal of the pioneer work in the field of cerebral palsy has been done by orthopedic surgeons, notably by Dr. W. M. Phelps of Baltimore. We find his classification extremely useful in outlining a plan of management for these children. Most of you are, I am sure, familiar with this classification, and I think it is well to understand that it is made on the basis of the peripheral manifestations, that is, on the variations of the motor handicaps that are present. For sake of completeness, we include it here:

(1) Spasticity: The characteristic feature of the spastic is the hyper-irritability of muscles and the exaggeration of the stretch reflex. Ordinarily when a muscle contracts, its antagonist relaxes. This is easily demonstrated in the elbow, where the extensors of the elbow relax as the flexors contract, allowing motion. If the extensors of the elbow are spastic, the exaggerated stretch reflex will come into play when attempts are made to flex the elbow; these muscles will contract and block the motion.

(2) Athetosis: The characteristic feature of the athetoid is involuntary motion. The brain lesion is considered to be in the basal ganglia, which act somewhat as brakes, to filter out unnecessary motions in carrying out some voluntary act. The athetoid children have involuntary and unnecessary motions come through whenever they try to carry out some useful activity, and this interferes with their function to a great extent. In their own effort to block this involuntary motion, they tense their muscles, and this tension becomes a great motor handicap and results in a rather marked resemblance to spasticity in some instances, although it is not too difficult to distinguish the two on examination. The spastics and the athetoids make up the bulk of the cerebral palsied children, the athetoid cases being slightly more frequent than the spastic. Between them, they account for about 80% of all cases.

(3) Ataxia: The characteristic feature of the ataxic is the disturbance of balance and position sense.

(4) Tremors: Here too, the basic manifestation is involuntary motion, but it is in reciprocal muscle groups. This occurs primarily in adults, so is of little concern here.

(5) Rigidity: The characteristic feature rigidity is a "lead pipe" feel to the muscles. The joints can be carried through a full range of motion, but there is a constant resistance by the muscles to this motion. This is thought to be due to a diffuse brain lesion, and these cases combine some of the characteristics of the other types.

In planning for the education and development of these children, of what importance is it to classify them according to their peripheral manifestations? There are a number of factors involved.

The prognosis, or outlook for educability may be somewhat better in the athetoid than in most of the spastics or rigidities, but there are, of course, many individual exceptions. It is quite important to us, as surgeons, to make the distinction, because certain surgical procedures are very effective in the spastic, but likely to be total failures in the athetoid with the same deformity. It is of some importance to all personnel dealing with these children to be aware of the distinctions, however, because of the direct effect that the motor handicap has on the personality and social development of the child.

Physical Condition and Emotional Reaction

The psychologists tell us that there are three basic emotions in small children: *fear, anger,* and *love.* We are told that infants are born with an inherent fear of falling and of loud noises. The spastic child, on hearing a loud noise, jumps as does any other child. When he jumps, he sets up a chain of stretch reflexes. This tends to make

him quite helpless and immobile, so that his fear of loud noises is likely to be greatly exaggerated, as compared to that of the non-handicapped child. Likewise, any loss of support or physical security is usually compensated for by muscular action of one sort or another, and whenever the spastic carries out such muscular action, it again sets up a chain of stretch reflexes, which immobilize him and make him more helpless. Thus, fear of loss of support becomes markedly exaggerated.

As a result, the spastic is likely to be a very fearful child, and likely to become very sullen and helpless. He learns early that his best defense against falling is to do nothing, because any efforts he makes to prevent his falling, result in even greater helplessness. He also learns that whenever he is called upon to carry out some muscular activity he sets up these stretch reflexes and tends to lose support, so he is likely to become a sullen, docile child helpless out of all proportion to his physical handicap. A great deal is said about the importance of security for a child, usually in reference to his emotional security. The marked insecurity of a spastic child is based on his physical insecurity and this can be readily carried over into the other aspects of his personality development. The athetoid, on the other hand, has no such chain of stretch reflexes set up, and is not nearly so fearful of either loud noises or loss of support. Hence he is much more likely to be a pleasant, alert, secure individual and to be much more attractive to those dealing with him.

Anger is based on incomplete restraint. The severely handicapped spastic may show very little anger because he is so completely restrained that all desirable things are out of his reach. The mildly involved spastic may be incompletely restrained and develop rather high degrees of anger. The athetoid is usually incompletely restrained, and is constantly frustrated by involuntary motions interfering with his voluntary acts, so that he is likely to exhibit a great deal of anger, and is likely to have violent fits of temper. These are usually short lived, and do not result in the sullenness, or tendency to hold a grudge, that is present in the spastic.

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Love may be considered the other side of fear and anger, and is engendred early from fondling, cuddling, and similar pleasant sensations. Since these efforts on the part of parents or attendants set up a chain of stretch reflexes, the spastic is likely to resent such caresses and, since he becomes docile and sullen, receives less and less loving attention, and thus becomes less affectionate himself. The athetoid, on the other hand, finds his involuntary motion restrained pleasantly by fondling and holding, so that he is highly pleased by early caresses and responds warmly to them, thus becoming a very affectionate individual.

The typical picture of the athetoid then, is that of a happy, affectionate, cooperative, venturesome, mischievous, quick tempered child, whereas the typical picture of the spastic is of a quiet, shy, fearful, sullen, resentful, helpless, and unresponsive child. Of course it is understood that there are many other factors which go into the personality makeup of any child.

The above are tendencies and not absolutes. There are many modifications by environment and other factors. Nevertheless, these basic physical or motor characteristics are a big factor in determining the personality of the

child that is being treated, and are factors of prime importance to those planning his education.

Treatment Varies with Type of Injury

Spasticity and rigidity do not always involve the entire body, and athetosis occasionally does not. In those in whom one arm and one leg are involved, a sub-classification of spastic hemiplegic, right or left, is made. Where both legs are involved without the involvement of the upper extremities, a sub-classification of spastic paraplegic is made. These cases, of course, present problems of considerable interest to the orthopedist, and usually offer a much better prognosis.

In the hemiplegics, we sometimes carry out no treatment for the involved arm. This is done because of the possibility that the involved hand may have been the patient's leading hand, had the hemiplegia not occurred. In that instance, attempts to train the involved hand may result in maintaining the dominance on the damaged side of the brain, and thus result in some speech difficulties, and in behavior problems. I am well aware that there is considerable controversy about the effect of handedness on speech and behavior problems, but this seems quite definitely established as far as the spastic hemiplegic is concerned. Dr. Phelps has emphasized the great importance of refraining from doing anything that might tend to make the involved hand the dominant hand in these children. My relatively brief experience has certainly borne out his dictum.

Therapy

Treatment for the cerebral palsied is prescribed under seven headings:

(1) *Physical Therapy.* The physical therapist carries out education, as contrasted to re-education as done in polio, of the involved muscles, whether the involvement be spasticity, rigidity, or the involuntary motions of the athetoid. She deals to a great extent with the function of these muscles, and particularly the function of ambulation.

(2) *Occupational Therapy.* The occupational therapist concentrates, to a great extent, on training in "self help" activities. She starts off with simple grasp and release mechanisms of the hands, moves on to eye and hand coordination, feeding patterns, and the various techniques involved in the process of dressing, such as buttoning and lacing.

(3) *Speech Therapy.* The speech therapist undertakes the education of the motor apparatus involving the speech mechanism, including breath control, tongue control, lip control, as well as control of the laryngeal muscles In addition, the speech therapist must deal with those sensory disturbances, such as hearing loss and the various forms of aphasia that crop up in the cerebral palsied.

The basic technique of all three therapists is repetition. The child is taught to carry out certain actions, and then is required to repeat them until the particular activity becomes a more or less automatic function, much in the same manner that a non-handicapped individual is taught to type or to play the piano. In other words, the cerebral palsied child must be taught to do those things that the non-handicapped child learns to do more or less automatically.

There is a basic fundamental principle involved in these activities, having to do with the establishment of new neural pathways. In the formation of a habit pattern an activity is

carried out repeatedly and in so doing the resistance to the transmission of the nervous impulse from the brain to the muscle carrying out the activity is diminished. There is a law to the effect that the more a neural pathway is used, the less resistance will be met at the synapses. Physical, occupational, and speech therapists in most of their activities are applying this law.

Other Treatment

(4) *Apparatus.* Braces, special shoes, special chairs, and gadgets of various sorts are frequently prescribed to make the patient more self-sufficient, to help attendants in caring for him, and to help the various therapists in training him.

(5) *Surgery.* Attempts have been made to create neurosurgical procedures which might alter the basic pattern of the condition, but these have not met with outstanding success. Most of the surgery carried out on these children is done by orthopedists. It includes lengthening of the heel cords, stabilizing and releasing contractures at the knees and hips, transferring tendons, and destroying some of the nerve supply to spastic muscles. Practically all of these procedures are carried out on spastics. Little or no surgery is done on the other types.

(6) *Drugs.* The drugs are used in the management of the cerebral palsied chiefly for the control of the seizures that so frequently accompany this condition. This is hardly within the province of the orthopedic surgeon as such, although in individual instances, we find it necessary to take over this function at times. Certain drugs can be quite useful in relaxing the tension of the tension athetoid, but are used primarily as aids to the various therapists. There is no drug that has any basic effect on cerebral palsy per se, and it is extremely unlikely that drug therapy will ever occupy a place of very high importance in the management of this condition.

Education

(7) *Special Education.* There have been various estimates in regard to the mental ability of these children. A generation or two ago it was considered they were all feeble minded. A few years ago, estimates were to the effect that about 75 per cent probably had normal mentality. Dr. Leslie Hohmans of Duke University, at a recent meeting of the American Academy for Cerebral Palsy, reported a survey which indicated that only about 50 per cent were definitely educable. The orthopedic surgeon prescribes special education for these children, but rarely is he in a position by virtue of his training or experience, to give explicit directions as to how his prescription should be compounded. If the orthopedist can give you a picture of how cerebral palsy looks to the orthopedist, perhaps you can take this knowledge, and apply the standard principles of education to these children.

Certainly, the goal of all of the other treatment is to make it possible for these children to profit from educational techniques, and to make it possible for such children to use such education as they may acquire. There has been a tendency at times, to concentrate all efforts on the education of these children, overlooking the fact that they are given a fund of knowledge, but are not given the ability to apply it. The educator must not overlook the fact that the child must have some means of expressing himself from the motor standpoint, either through speech, or

some control of the hands. It is not necessary for him to be ambulatory in order to be usefully educated, but some means of application and expression must be present.

Correlating the Total Picture

In order to avoid the pitfalls of the Indian blind men in describing the elephant, we must correlate the descriptions of all who have observed this condition, and coordinate the activities of the various fields who are attempting to aid these children. It is my feeling that the *treatment of first choice* is for the child to live at home and attend regularly at a day school which provides him with physical, occupational and speech therapy, as well as regular schooling, and that he be under adequate medical supervision to provide him with the necessary guidance for these groups, the proper apparatus, surgery, and drugs. The *treatment of second choice* would appear to be that the patient "live in" at an institution providing all these facilities under one roof. In actual practice, we find that the vast majority of our patients live at home, attend special classes for their schooling, and receive their therapy from a parent or other attendant who has been instructed by a therapist in each of the three fields. It has been a pleasant surprise to see how much progress can be made under this arrangement, which is far from ideal. The progress under such a program is, however, dependent to a great extent upon the ability, emotional adjustment, and drive of the parent involved.

Unfortunately, in many instances, no special schooling of any kind is available to a great many of these children. Certainly an organization such as this Council still has a great deal of pioneering work to do in providing adequate educational facilities for the cerebral palsied.

OUR SELVES AND SOCIETY

(*Continued from page 298*)

Many as are the interests which social systems satisfy, always unsatisfied interests remain over, and among them are interests to which system, as such, does violence whenever it lays its hands upon us. The best Commonwealth will always be the one that cherishes men who represent the residual interests, the one that leaves the largest scope to their peculiarities. (2, p.142)

It seems to me that one of our most important tasks as teachers today is to produce students who as socially conscious, loyal group members will be concerned with their own rights and the rights of other individuals, but who will, as self-conscious individuals, acknowledge both their indebtedness to society and their responsibility to their fellow men.

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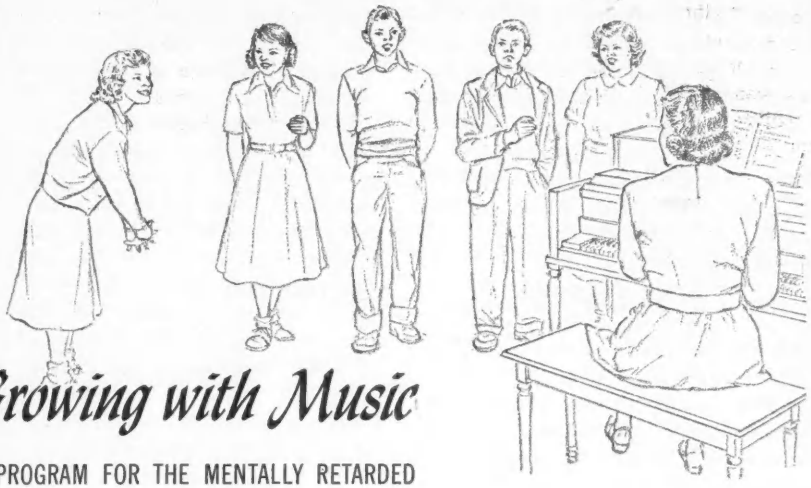
Growing with Music

A PROGRAM FOR THE MENTALLY RETARDED

ANN MILLER

IT was with hope rather than assurance that we planned a program of music and rhythms as a regular part of the curriculum in a Lincoln, Nebraska junior high school class for mentally retarded pupils. In the class used as a basis for the project, the children were strange to each other, and seemed to have little basis for security or socializing when they entered the special class in a new school. The only person in whom they all shared a degree of confidence was their teacher who had visited them in their own homes prior to the opening of school. The average IQ for the group who entered the experimental program was approximately 62 (Stanford Binet Form L), and the range was from 55 to 72.

In this essentially unfamiliar situation, with the children's initial handicaps and history of failure in mind, it seemed necessary to find some activity to give them confidence and a feeling of accomplishing together. The first decision, that activities should involve regular participation in music and rhythms, was arrived at because perhaps only in this area of curriculum can pupil growth be so completely unhampered by dependence on a basic body of factual information.

Why Music Was Chosen

Singing and dancing were selected since they involve total and simultaneous participation and could serve as the necessary framework for supporting the goals set for this group. Specifically, the goals were: (1) to improve speech in rate, diction and enunciation; (2) to serve as a positive emotional outlet through action and dramatization, (3) to improve poise, (4) to provide opportunities for individual initiative and leadership, (5) to increase the

• MRS. ANN MILLER is a teacher of mentally retarded children at Whittier Junior High School, Lincoln, Nebr.

sense of rhythm, dexterity, and freedom of movement. Although these goals seemed optimistic at the time the program was planned, in actual experience the children's progress far exceeded the expectation. The regular teacher of the group who administered the music program observed its broad outcomes as well as the specific gains which followed in its wake.

How the Music Project Grew

It was decided that the project should begin wth singing. When everyone, including the teacher, is singing it is difficult to judge the superiority or inferiority of another's participation and this tends to lend security to each child. The physical aspects of the room were planned to encourage the group feeling. The children sat in chairs placed in a large semi-circular arc so that the teacher, seated at the piano, could see every child. The fact that the teacher, to whom they had talked in their own homes, provided the accompaniment seemed to help break down any feeling of strangeness and rigidity. Some months later, when the program was well under way and the feeling of strangeness dispelled, an additional person such as a paid accompanist might have had little or no effect. It is important, too, that the teacher was sufficiently familiar with the music so that she was able to observe the children's reactions carefully as she played and sang with them. This increased her identification with the group, adding to the children's security in their initial contact with the program.

The teacher had no special musical ability and very little training in either music or dancing. A professional musician might have been less happy with the children's first attempt! But more important than musicianship in insuring a satisfactory experience for the children, was the teacher's comprehensive knowledge of their individual limitations and needs.

Songs were taught by rote and were selected for their appeal, repetitive words and choruses, and for simplicity of tune. Occasionally a song known to the group such as "Home on the Range" was introduced to give the children an opportunity to express their familiarity with it. However, this was not done until the learning of new and unfamiliar songs no longer seemed to offer any obstacle. To their satisfaction, the children soon realized that they could learn a song rather quickly.

Nonsense songs, songs employing actions with hands and feet and those producing some unusual effect, were among the list. "Rounds" were taught, but for months they were sung as straight songs before any attempt was made to render them as a round song. By the end of the school year, the group, divided into two parts, could sing a round through twice with a fair degree of competence. Later in the year, Western songs were included at the request of some members of the class, as were a few popular songs. For the most part, however, the latter were let strictly alone after the initial attempt as many of them proved too difficult as to words and melody. The children rejected those songs as offering little satisfaction since they had to associate enjoyment with their participation in the group.

In the course of the school year, the children learned 52 songs. This included an actual rendition of all the words and ability to unhesitatingly recognize the tune.

The music period generally began with some "warm-up" singing of songs already familiar to the children.

"Warm-ups" were conducted in a variety of ways. Sometimes the teacher started them, sometimes the children, a favorite method being for the class to identify the song from the opening bars of the melody. Although there was considerable similarity in many of the tunes, most of them being played in the key of C or the key of F, the children quickly achieved an accurate sense of tune discrimination. Such discriminatory judgments which the *entire group* demonstrated appear unusual because none of the children showed any particular musical ability. With the possible exception of two or three of the 15 members of the class, none of them could accurately match a tone, sung or played.

For the remainder of the class period the group moved from the familiar to the unfamiliar. Sometimes two or three new songs were briefly introduced each day. Other diversified activities were offered including some circle games. The way was constantly left open to encourage the children's help in suggestions and planning. Their participation increased steadily throughout the year.

Circle games were casually introduced as a technique to get the children on their feet and into a simple formation and to initiate some measure of control of hands, feet and bodies. Occasionally records were played and the children were invited to dance or simply move to the music as they wished. The teacher took part in enough of these activities to give the children an opportunity to accustom themselves to moving to music without the feeling of being under observation or judgment.

At the end of 12 weeks, two films demonstrating square dancing were shown to the group. The pupils showed varying degrees of interest, but some asked if "we could do that." Accordingly the group was led into their first "dance," a simple circle formation. This launched dancing and for the remainder of the year it was an integral part of the class procedure. The children's subsequent success and enjoyment of dancing seemed to justify the long weeks of gradual introduction of pre-dancing activities.

Dancing, Too

As in singing, dancing was begun simply so as to assure immediate success and satisfaction. Circle dances and a dance involving individual activity provided introductory repetoire. From there the group was led into line dances, such as the Virginia Reel. These were helpful in teaching activities associated with square dancing, just as the circle dances were used in teaching the pupils to move together, left and right, and in building control for "holding a square" later on.

It was necessary to improvise new dances involving these simple techniques in order to provide some diversity and hold interest until the group was ready for further progress. A simple routine to the tune, *Skip To My Lou,* was devised to teach skipping. It was necessary, also, to compose the first square dance so that it would be sufficiently elementary for the group's limitations.

Every precaution was taken to avoid discouragement and frustration for any boy or girl and to ensure satisfaction and enjoyment for all. Later, as the children actually learned to execute square dances and began to ask to be taught certain standard dances about which they had heard, modifications were introduced. In the course of the weeks that followed, the children learned to do 17 dances reasonably well.

(*Continued on page 310*)

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Of course, the children varied considerably in their ability. They learned to "circle left," "circle right," "balance and swing," "promenade," "allemand left and right" and "couple out to the couple on the right." At the end of the year they had progressed sufficiently to execute "grand right and left" and some of the other more complicated parts of square dancing.

How the Children Grew

The teacher's observations were noted weekly in a group record and an appraisal of this record assisted in evaluating the outcomes of the project. In summary, these were the results the program achieved:

(1) Improved speech: Some songs were particularly selected which required specific enunciation to achieve certain "nonsense" values. Considerable improvement in rate and diction was noted in the course of the narrative group record.

(2) Emotional outlet: The therapeutic value involved in "letting off steam" achieved undeniable results, but probably more important was the fact that the activities provided for acceptable exhibitionism in the matter of action and dramatization.

(3) Improved poise: Individual embarassment and shyness declined to the point of almost total absence in the group participation of the pupils. Individual children volunteered to sing solos or duets, to work in a dance demonstration group, and, later, to engage in dramatization with others.

Early in the year the class had visitors by previous appointment. The children worked out the activities that day, in advance, and carried them through with poise, if some restraint. However, later in the year when visitors appeared unannounced, the children proceeded with their activities, which happened to be self-directed, paying no attention to the guests and apparently uninhibited by them. Mid-year, at an all-seventh-grade party, three of the children voluntarily entered into a square when a dance was called with which they were familiar, although they had only been dancing for six weeks and had learned the particular dance only two weeks prior to attending the party.

(4) Opportunity for initiative and leadership: More and more as the year wore on, the children took an increasing initiative in planning their activities. They eventually evolved a weekly schedule as to what days they would sing, what days they would dance and on what days they would do both. On Fridays they planned an entire period of games, selected individually in turn, and increased their knowledge of games in this way tremendously. The teacher felt particularly rewarded during one planning session when she was told gravely, "And on Tuesday, you can teach us that new dance you were talking about." Further, they added dramatizations (verbal) to their activities and took turns being "head of it" and selecting their own "casts." They assumed responsibility largely for whatever discipline was necessary by dint of group pressure. They were especially interested in seeing to it that everybody participated, that is, that no one "sat around and didn't do nothin'."

(5) Improved dexterity, freedom of movement and sense of rhythm: Such improvement was apparent, if not dramatic. Some of the chldren had rather severe motor deficiencies and all of them danced at a slower rate than would a normal group. However, their rate of movement did pick up as they

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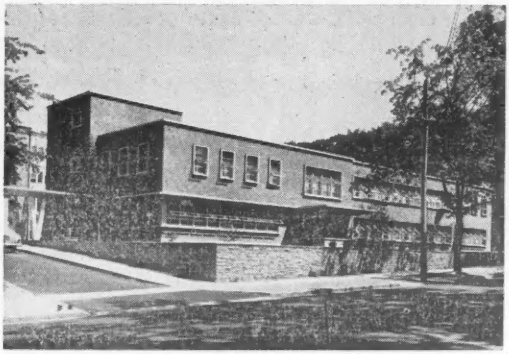

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began to require an increased tempo in their musical accompaniment. Moreever, they were able to synchronize movement to a greater degree.

The record also indicates that the children demonstrated considerable skill in retention and recall in their musical activities, and that they appeared to accelerate their initial learning rate to a marked degree in this area. Further, the situations involved in learning songs and dances provided an effective outlet for the learning of social information and for developing a better vocabulary. More significant for the future of the individual child, however, was the growth in their acceptance of each other, implicit in such practices as taking turns, sportsmanlike behavior, democratic selection of partners in dancing, and in self-discipline of the group. Perhaps of greatest meaning for each child was the continued rewarding sense of achievement without which the other outcomes could not have been realized.

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for Teachers of The Mentally Retarded

JEROME H. ROTHSTEIN

ONE of the most persistent problems in the professional advancement of special education has been the certification of teachers. Teacher certification is the first step in the advancement of the profession. Regardless of physical plant, community cooperation or any other factor, the special education program cannot be a success unless the school system is able to attract well qualified personnel. This report seeks to present current information concerning state certification requirements for teachers of the mentally retarded. The tabular data are a compilation of information secured through the use of a questionnaire and state certification guide books made available through the various state departments of education. The report covers the 48 states and the District of Columbia, Hawaii, and Alaska.

Willing states that the basic purposes of teacher certification are: "To assure for the children and youth of our schools the quality of teaching which is usually rendered by teachers who have sufficient educational preparation to understand the growth and development of human beings and to serve as masters of the subject matter which they teach" [1] and "To protect the competent teachers who are well-prepared to serve effectively as members of the profession from those who are ill-prepared and incompetent." How far then have the several states and territories come in the last two decades toward meeting these objectives insofar as teachers of mentally retarded children are concerned?

Current Status

In 1931, Schleier reported that eight states: Connecticut, Massachusetts, Minnesota, Missouri, New Jersey, New York, Pennsylvania, and Wyoming issued special certificates for teachers trained in the education of the mentally retarded.[2] In 1953, 25 states and the District of Columbia required that special class teachers of the mentally retarded meet specific standards established by the various state education departments. In addition, six states, Colorado, Georgia, Maryland, Oregon, Washington, West Virginia as well as the territory of Hawaii are making plans to establish certification requirements in this field. When the latter states establish their requirements, a total of 31 states and one territory will have provided some minimum standards for teachers working with mentally retarded children. Geographically speaking, there seems to be a lag in certain areas of the South and the Great Plains.

[1] Willing, M. H. *Schools and Our Democratic Society.* 1951. Harper & Brothers. New York. p. 291.

[2] Schleier, Louis M. *Problems in the Training of Certain Special Class Teachers. Contributions to Education No. 475.* 1931. Bureau of Publications, Teachers College, Columbia University, New York. p. 21.

• JEROME H. ROTHSTEIN is assistant professor of education at San Francisco State College.

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The auditory training unit, developed by Jay L. Warren, Inc., of Chicago, will enable many children not only to know sound and to help develop their speech, but will enable them to take part in a home life as normal as possible considering their hearing deficiencies, school officials said.

Each child listened thru a set of headphones, which transmits the sound from a central unit which is a combination radio, phonograf, and speech unit. The headset is operated by dual controls, enabling the child to adjust the volume to each ear so that when both receivers are tuned the sound will come thru both ears as thru one.

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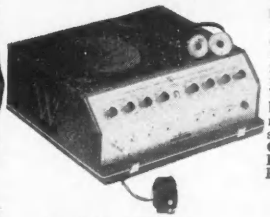

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Patterns of Certification

Just as there is lack of uniformity in certification requirements for the elementary and secondary fields, there is a similar lack in the field of the mentally retarded. This factor severely restricts the mobility of the teaching population. All of the 25 states and the District of Columbia require that the teacher of the mentally retarded hold a valid basic teaching certificate for work with normal children. Of the states reporting, 20 provide that holders of the elementary or secondary certificate are eligible for certification upon meeting the special education course requirements. It is interesting to note, though, that New Jersey and Pennsylvania require that holders of the basic secondary certificate meet certain elementary school subject requirements as well as special education requirements prior to certification. The other six states specifically require only that candidates for the certificate for teaching the mentally retarded must have basic training in elementary education. The problem of basic training in education has always created a dilemma in the field of special certification. Is the teacher trained in specific subject matter fields in secondary education competent to handle a class of mentally retarded children at the elementary level regardless of special training? Since this situation occurs constantly, there is need for further study of the patterns of training and certification. Equally important is the question of the type of training and certification for teachers of severely retarded children.

Experience Requirements

The pro and con of the importance of prior teaching experience with normal children to teachers of the mentally retarded have been discussed for years. Unquestionably, previous experience with normal children is important and basic for success in the special class. But, in these days of extreme teacher shortages on all levels, there seems some reason to question the wisdom of excluding the inexperienced, well trained teacher. In the states requiring certification, only six make previous teaching with normal children a prerequisite to certification. A maximum of two years of experience with normal children is required in these states, with the majority requiring one year. One state reports that it plans to eliminate previous teaching experience as a requirement.

Academic Requirements

There is extremely wide variance in the number of semester hours in special education courses required for certification by the various states. Requirements range from a low of 12 semester hours in New York to a high of 40 semester hours in Kansas. The average is 22 semester hours or roughly the equivalent of one academic year or three to four summer sessions. It is difficult to evaluate certification requirements entirely on the number of units or courses required for special certification. The basic elementary or secondary patterns and requirements must be taken into consideration in any comprehensive study of this problem.

There seem to be common patterns of course requirements in the several states. The majority list a group of required courses for certification and supplementary elective courses to fulfill the total semester hour requirements. The idea of a group of basic course requirements appears healthy as it tends to insure some competence in

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the foundation program. The following courses appear most regularly in the certification requirements: (a) a survey course in the education of exceptional children, (b) methods of teaching the mentally retarded, (c) child growth and development, (d) arts and crafts, (e) educational measurements, (f) speech correction, and (g) student teaching in special classes for the mentally retarded. An extensive list of elective courses including different aspects of psychology and remedial techniques is common to the various requirements. In California, Connecticut, and New Jersey holders of basic teaching credentials can qualify for some type of provisional special certificate upon the completion of a part of the required special education work, a reasonable system in light of the teacher shortage. Such certificates have limited periods of validity and may only be renewed by the completion of additional academic training. Various states have additional emergency clauses to provide for extenuating circumstances. One especially reassuring factor which acts as a safeguard for mentally retarded children is the fact that all of the states specifically spell out in their regulations that state aid will not be paid unless a specially certificated teacher is in charge of the class for the mentally retarded.

Historically speaking, little change has taken place in the thinking concerning the length of the educational training program or the types of courses required over the last 20 years. It is true, that the number of states which now require special certification for teachers of the mentally retarded is three time greater than it was 20 years ago but no realistic evaluation of teacher education or certification requirements has been made in the last two decades. It is possible that the current study on teacher education carried on by the United States Office of Education may bring some degree of order out of the past and present chaos in certification.

Problems for Future Study

Study of the various state certification requirements for teachers of the mentally retarded points up several problems which need further exploration: (a) the possibility of more uniform state certification requirements to permit greater mobility of the teaching population, (b) the type of certification pattern that would best meet the needs of the schools offering programs on the junior-senior high school level, (c) certification requirements for teachers of severely mentally retarded children, (d) Whether there is a necessity for teaching experience with normal children prior to special certification, and (e) comprehensive study of the course requirements and course content for certification.

State education departments are quite aware that the certification situation needs research and clarification. Again and again in answer to the questionnaire came the comment, "We certainly need help with this problem."

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STATE CERTIFICATION REQUIREMENTS FOR TEACHERS OF THE MENTALLY RETARDED

State	Basic Certificate Required	Semester Hours Required	Years Teaching Experience with Normal Child	Courses in Special Education
CALIF.	Primary Elementary Junior High Secondary	18 [3]	0	**Required:** Arts and Crafts Child Development Curriculum and Methods of Teaching the Mentally Retarded Education of Exceptional Children Student Teaching **Electives:** Abnormal Psychology Clinical Psychology Guidance Mental Deficiency Mental Hygiene Remedial Subjects Speech Correction
CONN.	Elementary Secondary	24-30 [4]	0	Subjects not specified
DEL.	Elementary	18	0	Clinical and Abnormal Psychology Education of Exceptional Children Industrial Arts and Manual Training Mental Hygiene Speech Correction Student Teaching
D. C.	Elementary Junior High	Not Specified	0	Two Courses in Materials & Methods
FLA.	Elementary	18	0	Crafts Methods and Materials for Teaching Mentally Retarded Psychology of Exceptional Children Psychological Measurements Speech Development
ILL.	Elementary Secondary	30-36	0	**Required:** Characteristics of Mentally Retarded Student Teaching Tests and Measurements Teaching Techniques with Mentally Retarded **Background Courses:** Crafts Music Physical Education Speech Development Student Teaching with Normal Children **Electives:** Audio-Visual Education Guidance Related Courses in Psychology and Sociology
IND.	Elementary Secondary	15	0	Clinical Psychology Education of Exceptional Children Methods of Teaching the Mentally Retarded Student Teaching Tests and Measurements
IOWA	Elementary Secondary	26	0	Subjects not specified but must include clinical experience
KANS.	Elementary Secondary	40 [5]	0	Behavior Problems of Children Child Development Educational Guidance Educational Measurement Educational Psychology Household Arts Methods for Teaching Mentally Retarded Remedial Reading Clinic Practice Speech Correction Survey of Exceptional Children

[3] Holders of valid California General Teaching credential may qualify for two year postponement of requirements certificate upon the completion of six semester hours from the listed courses.

[4] Holders of Connecticut limited elementary or secondary certificates and who have had three years of successful teaching experience may qualify by completing 12 semester hours' credit in special education.

[5] Twenty-five semester hours must be graduate credit.

STATE CERTIFICATION REQUIREMENTS FOR TEACHERS OF THE MENTALLY RETARDED

State	Basic Certificate Required	Semester Hours Required	Years Teaching Experience with Normal Child	Courses in Special Education
KY.	Elementary Secondary	24	0	Abnormal Psychology Arts and Crafts Curriculum and Methods for Teaching Mentally Retarded Education of Exceptional Children Mental Deficiency Mental Testing Organization and Administration of Programs for the Mentally Retarded Remedial Instruction Student Teaching
LA.	Elementary Secondary	18	2	Arts and Crafts Child Psychology Child Welfare Clinical Psychology Group Therapy Mental Hygiene Mental Testing Organization and Administration of Classes for Exceptional Children Social Adjustment of Mentally Retarded Special Problems in Education of Exceptional Children
MASS.	Elementary	30 [6]	0	Subjects not specified
MICH.	Elementary Secondary	28	0	**Required Courses:** Arts and Crafts Education of Exceptional Children Mental Hygiene Student Teaching **Specific Courses:** Education and Social Control of Mentally Retarded Mental Deficiency Methods of Teaching the Mentally Retarded Organization and Curriculum in Teaching Mentally Retarded **Related Courses:** Abnormal Psychology Anatomy Child Welfare Delinquency Guidance Mental Testing Social Psychology Social Psychiatry Speech Correction
MINN.	Elementary Secondary	20-30	2 [7]	Meet Requirements of Option 1, 2 or 3 Option 1: Four year course with major in teaching mentally retarded Option 2: Four year course with major in elementary or secondary education and minor in teaching mentally retarded plus student teaching with mentally retarded Option 3: 20 quarter hours in special education of mentally retarded plus two years of successful teaching experience in public elementary schools.
MISS.	Elementary Secondary	18	0	Subjects not specified
MO.	Elementary Secondary	24	1 [8]	**Required:** Adolescent Psychology Arts and Crafts Education of Exceptional Children Methods of Teaching Reading **Electives:** Abnormal Psychology Clinical Psychology Guidance Mental Hygiene Mental Testing Physical Education Sociology Speech Correction Student Teaching with Mentally Retarded Tests and Measurements

[6] May substitute three years of successful classroom experience and 12 semester hours in special education.

[7] Student teaching in classes for mentally retarded may be substituted for experience.

[8] Experience recommended but not required.

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STATE CERTIFICATION REQUIREMENTS FOR TEACHERS OF THE MENTALLY RETARDED

State	Basic Certificate Required	Semester Hours Required	Years Teaching Experience with Normal Child	Courses in Special Education
N. J.	Elementary Secondary Industrial Arts [9]	24	1 [10]	**Required** [11] Two of the following courses: Arts and Crafts for Slow Learners Curriculum Building for Different Maturation Levels Materials and Methods of Teaching Slow Learner Psychology of Mentally Handicapped **Electives:** Clinical Measurements Growth and Development Principles of Teaching Handicapped Children Reading Disabilities Speech Correction 120 hours of student teaching with mentally retarded or one year of experience in teaching mentally retarded, or 60 clock hours of clinical experience.
N. Y.	Elementary	12	0	Mental Measurements for Mentally Handicapped Nature and Needs of Mentally Handicapped Occupational Education Occupational Skills Practicum in Teaching Classes for Mentally Handicapped

[9] Holders of secondary or industrial arts certificate must present at least 12 semester hours in courses in elementary practices and procedures.

[10] May be met by completing 120 clock hours of approved student teaching or one year of approved experience in teaching mentally handicapped children or 60 clock hours of clinical practice.

[11] Limited certificate may be made permanent when applicant completes three years of successful experience in teaching academic slow learners and 18 additional semester hours of credits in listed courses.

STATE CERTIFICATION REQUIREMENTS FOR TEACHERS OF THE MENTALLY RETARDED

State	Basic Certificate Required	Semester Hours Required	Years Teaching Experience with Normal Child	Courses in Special Education
N. C.	Elementary	24	1	Arts and Crafts Education of Exceptional Children Growth and Development Mental Deficiency Mental Hygiene Methods and Materials for Teaching the Slow Learner Social Treatment of Feebleminded Student Teaching Tests and Measurements in Special Education.
OHIO	Elementary Secondary	15	0	No special certification but regular teaching certificate may be validated for teaching slow learning children upon completion of 15 semester hours including: Methods of Teaching Slow Learning Children Psychology of Slow Learning Children
OKLA.	Elementary Secondary	24	0	Subjects not specified
PA.	Elementary Secondary [12]	24	0	**Required:** Diagnostic Testing and Remedial Teaching Education of Exceptional Children Mental Hygiene Special Class Arts and Crafts Special Class Methods Student Teaching **Electives:** Abnormal Psychology Clinical Psychology Corrective Physical Education Guidance Mental Tests Sociology Speech Correction Teaching Experience [13]
TENN.	Elementary Secondary	Not Specified	1	Abnormal Psychology Clinical Psychology Education of Exceptional Children Education of Mentally Retarded Guidance Mental Testing
TEX.	Elementary Secondary	30	0	**Required:** Arts and Crafts for Mentally Retarded Education of Exceptional Children Materials and Methods for Exceptional Children Methods for Teaching Mentally Retarded Mental Deficiency or Psychology of Subnormal Organization and Administration of Classes for Mentally Retarded Speech for Exceptional Children Student Teaching Tests and Measurements for Exceptional Children **Electives:** Child Development Diagnostic and Remedial Reading Guidance Mental Hygiene Psychology of Exceptional Children
WISC. [15]	Elementary Secondary	18	0	Child Development Educational Psychology Mental and Educational Testing Methods of Teaching Mentally Retarded Problems of Exceptional Children
WYO.	Elementary	20	0	Arts and Crafts Classification of Exceptional Children Educational Measurements Individual Testing Remedial Methods Psychology of Exceptional Children Special Class Curriculum Speech Correction

[12] Secondary certificates may be validated by the completion of 12 semester hours in basic elementary school subjects.
[13] Successful experience in teaching, social service or as psychologist may be counted to a maximum of six semester hours at the rate of three semester hours a year in meeting requirements.
[14] Certificate not required. Information presented is suggested pattern.
[15] Graduates of Milwaukee State Teachers College with major in education of mentally retarded are automatically certificated.

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Another school year draws fast to a close and once more we, as your co-editors, wish to express our thanks to the many who have sent us contributions and suggestions for this column.

Now, however, we need your help in preparing fall issues during the summer months when we are out of contact with you. While experiences in successful teaching are fresh in your mind, take this opportunity to record some of these experiences and mail them now.

Your criticisms of this feature will be appreciated also. Let us know the type of information that would be most helpful to you. Our aim is to give you the assistance you want in the way you want it. If you feel that some areas have been neglected, look to yourselves. We print what you contribute.

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Here is a speech game that can be used with all types of cases, which is particularly useful as a blowing exercise for children with cleft palate. Cut out a bowling pin on a folded piece of construction paper to make it stand. Words can be printed, or pictures pasted on the pins which are then set up on a table. The game is played by blowing a ping-pong ball across the table to knock down the bowling pins. As each pin is knocked down, the child picks it up and names the words or pictures on the pin. Winner is the child who has most pins at the end of the game.

I have made a set of pins for each speech sound for use in articulatory cases. For the cleft palate case, the act of blowing the ball across the table toward the bowling pin helps to develop a directed air stream.—(MRS. ELLEN R. EAAS, *Morris Public Schools, Morris, Illinois.*)

DO'S AND DONT'S FOR SPEECH CORRECTIONISTS

A speech correctionist who wants her program to have standing in the community and cooperation from classroom teachers should observe all these rules. Some may seem self-evident and superfluous, but it is amazing how someone not completely sold on our program can magnify innocent omissions and transgressions.

(1) Have an earnest and sincere desire to want to teach and to enjoy it.

(2) Be honest, upright, and frank in dealing with all school personnel. Never carry tales between schools.

(3) Conduct your survey as efficiently as possible. We found the quickest method is for the entire speech correction staff to descend upon a

room and test each child in his seat in the presence of the teacher. She has all the answers to your questions of identification.

(4) Always test a teacher's referral and give him needed attention as soon as possible.

(5) Make a satisfactory schedule, preferably at a teacher's meeting. Allow your schedule to be rigid and yet flexible enough to allow for the special events, which invariably fall during the school week. Notify each teacher concerned when your schedule must be broken. In adhering to your schedule, do not be a doormat, neither be a demagogue, nor be a villain. Follow the Golden Rule.

(6) Respect the classroom teachers' opinion. She may know Johnny better than you do. She may have lived longer than you have, and wisdom sometimes comes with age and experience.

(7) Try to keep teachers' hours.

(8) Do not gravitate to your best friend's classroom upon entering the building. This practice can be very distressing to her and to her colleagues. Your best friend soon has three dozen youngsters clamoring for more attention than it is possible to give them, and her colleagues may resent your partiality. Be sociable but businesslike.

(9) Arrange your room to make it a pleasant place in which to teach.

(10) Do not expect the teacher to be a messenger to the parents. Do not hand a sealed message to the child for his parents until you have explained the situation to the teacher. After all, isn't she responsible for him? She may not understand.

(11) Do not make an unnecessary display of your games, if it can be avoided. Although they are motivating devices they mean recreation and an easy job to far too many of our citizenry. Yet the speech correctionist is as dependent upon her "games" as a teacher is dependent upon her textbooks.

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(12) As you quietly slip in and out of the classroom calling for the classes which did not appear, note classroom procedures, devices, and atmosphere.

(13) Visit a classroom when it is possible and feasible to do so. Inform the teacher in advance. There are activities during the school day when your presence can be most disturbing.

(14) As far as it lies under your control, try to maintain acceptable hall behavior for your classes.

(15) Do not take undue advantage of sick leaves, even though they are rightfully yours. Because of the nature of our work and the substitute situation, staying at home becomes easy. Any classroom teacher knows that speech correctionists are not a sick group. Witness all the fresh air and exercise they get (in going from and to school).

(16) Many primary age children beg all year to be enrolled in speech class. Satisfy their "insatiable curiosity" and, with the consent of the teacher, give a demonstration lesson in each primary classroom. Incidentally, the teacher will often be as interested as

the youngsters, though for quite different reasons.

(17) Attend as many faculty meetings as possible and identify yourself with the faculty.

(18) If the preceding suggestions have been observed, the classroom teacher usually wants to help. Give her definite, concrete suggestions, preferably in mimeographed form, for ways in which she can help. Do not attempt to make a speech correctionist out of her. Realize that she is your most valuable resource person and assistant in the speech correction program. Inform her of progress as her students improve.

(19) Cooperate with other specialists. Get a picture of the whole child.

(20) Do not neglect parent conferences.

(21) Gain cooperation and respect from the child. This is quite easily done because the games (motivating devices to us) are usually more intriguing than text books. Do not redirect a child's loyalty from his teacher to you, but demand only a fair share of it. Allow the child with the bouquet for his teacher, to give you, his other teacher, a flower or two, but do not accept the whole bouquet.

(22) Solicit the cooperation of your principal, and invite him to visit you. He is usually an educationally well-rounded individual who respects progress, especially as it affects his teachers and his students. He will be as pleased to see a great improvement in a speech difficulty as he is to notice a high test score in a textbook subject. The principal may be the coordinator of special services within his building.

(23) Let the public know what you are doing. Run newspaper articles about your work, with pictures, if possible. Give demonstrations and talks at PTA's, study groups, service clubs, and so on.

(24) In setting up a new program, be very sure to speak at faculty meetings.

(25) A speech to youth groups can do much to create a feeling of interest and good-will toward speech correction. It is rewarding indeed when a young lady says, "I too want to be a speech correctionist," or when a young-man-to-be says, "I didn't know it was wrong to laugh when my brother couldn't say, 'rabbit'. I had never really thought about it."

(26) Try to get standard school equipment for your room. A teacher need not carry her attendance register and grade book with her each morning, noon, and night, because she has no place to leave them safely. Neither should a speech correctionist be a pack horse.—HATTIE SAAIJENGA, *speech correctionist, Galesburg Public Schools, Special Education, Galesburg, Ill.*

WHERE TO GET IT

Many oil companies have large pictures that are excellent to use for language development and speech reading exercises. These can be obtained each month. They are large and colorful—delight the children and make for attractive room decorations.—MRS. ANNA MAE WORTHINGTON, *Columbus, Ohio.*

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NEW BOOKS BRIEFLY NOTED

BRUCKNER, LEONA S. *Triumph of Love; an unforgettable story of the power of goodness.* 1953. 213 p. Simon and Schuster, New York, N.Y. $3

Leona Bruckner and her husband, Hy, tell of their reactions at the birth of the second child, born without arms. At first unable to accept Billy's misfortune and its possible effect on their family life and their physically normal child, these parents have found joy in Billy's amazing progress and increasing ability to help himself. Their story offers hope and encouragement to all parents of children with severe deformities. A condensation of the book appeared in the January, 1953, issue of the *Ladies Home Jornal.*

INTERNATIONAL UNION FOR CHILD WELFARE. *International study conference on child welfare...Bombay, December 5-12, 1952; report of the proceedings.* 1953. 266 p. Published in Geneva, Switzerland, and available in the US from the International Union for Child Welfare, 129 E. 52nd St., New York 22, N.Y., at $1.50 a copy.

Included are the papers given in the third session of the Conference, which was devoted to The Care and Education of the Handicapped Child (p. 83-132), and the reports and findings of several discussion groups on the handicapped child.

KLEIN, ALEXANDER, ed. *Courage is the key.* 1953. 287 p. Twayne Publ., New York, N.Y. $3.75.

The 49 true stories brought together here for the first time in book form were written by men and women who overcame physical, social, and psychological handicaps. Some of the brief stories are by famous authors who describe their own experiences or those of others. Physical handicaps which figure in the book include deafness, arthritis, cerebral palsy, epilepsy, cancer, poliomyelitis, blindness, and mental disease.

PERIODICAL ARTICLES AND PAMPHLETS

Auditory Impairments

BLOUNT, JOHN H. "Deafness with additional handicaps." *Special Schools J.* Oct. 1953. 42:4:8-11.

A description of a school for the deaf and partially deaf with additional handicaps (educationally subnormal and physical handicaps) in England.

HAYES, GORDON M. "Teaching the deaf-blind to wrestle: (a case study.)" *Internatl. J. for the Education of the Blind.* Dec. 1953. 3:2:224-229.

Methods used and difficulties encountered in teaching a deaf-blind teen-age boy to wrestle are discussed. The writer felt that the training would be useful in building up the boy's physical condition and improving his general sense of balance which was poor.

KEASTER, JACQUELINE. "Suggestions to the parents of a deaf child," by Jacqueline Keaster and Gloria Hoversten. *Trans., Am. Acad. Ophthalmology and Otolaryngology.* Sept.-Oct. 1953. 57:5:823-840.

This "letter" is not only to instruct parents but also the otologist. In fact this latter purpose is considered far more important.

NELSON, BOYD E. *Talks with parents and teachers of deaf children.* 1953. In two parts: Pt. I, 63 p.; Pt. II, 81 p. Utah Schools for the Deaf and the Blind, Ogden, Utah.

In Part I, differences between the deaf and the hard of hearing and the special provisions needed by them are discussed. Part II deals with established lipreading programs, speech training, and assessment and fitting of hearing aids.

Cardiac

OVERHOLSER, MARGERY T. "The congenital cardiac program and the nurse." *Am. J. Nursing.* Dec. 1953. 53:12:1478-1480.

By sharing information about the child, his needs and care, the nurse, social worker, and school personnel serve the best interests of the patient and his family.

Orthopedic and Neurological Impairments

CLAYTON, T. MORRISON. "A cerebral palsy unit within a day school for physically handicapped children." *Public Health.* Mar. 1953. 66:6:92-97.

Types of schools for handicapped children are briefly discussed and the Cerebral Palsy Unit in Coventry, England, is described.

KENTUCKY. LEGISLATIVE RESEARCH COMMISSION. *Cerebral palsy in Kentucky; a study of the State's orthopedically handicapped children.* 1953. 63 p., illus. (*Research publ. no. 34*) Planographed. The Commission, Frankfort, Kentucky.

Factual data on the cerebral palsy situation in Kentucky, facilities in the state, and limitations of the Kentucky program are presented. Gives findings and recommendations of the Commission.

SIEVERS, DOROTHY J. "Some suggestive results in psychometric testing of the cerebral palsied with Gesell, Binet, and Wechsler scales," by Dorothy J. Sievers and Ralph D. Norman. *J. Genetic Psychology.* 1953. 82: 69-90.

Investigation into the use of the scales with 34 cerebral palsied patients indicates some of the problems encountered with standard psychometric instruments.

"The teaching of writing to cerebral palsied patients." *Am. J. Occupational Therapy.* Nov.-Dec. 1953. 7:6:247-249, 270.

This paper is the result of the combined thinking of the occupational therapists in and around New York City about the problems of teaching writing.

Retarded Mental Development

ARBITMAN, HERMAN D. "Rorschach determinants in mentally defective and normal subjects." *Training School Bul.* Nov. 1953. 50: 7:143-151.

The author reports that the Rorschach can be given satisfactorily to mentally defective subjects with MA's as low as 4-11 and with IQ's as low as 36.

BLISS, MONTE. "The homogeneity of the mentally subnormal; a fallacious concept."

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Training School Bul. Nov. 1953. 50:7: 152-156.

From the standpoint of intellectual functioning, physical development and self-care, personality and emotional make-up, the range of variables is great.

APR 20 1954

JERVIS, GEORGE A. "Revascularization of the brain in mental defectives," by George A. Jervis (and others.) *Neurology.* Dec. 1953. 3:12:871-878.

Reports the results of the operative procedure of Beck, McKhann, and Belknap carried out on 25 mentally defective patients. "...No significant improvement was observed in intelligence quotients, clinical symptomatology, and electroencephalographic findings."

Speech Impairments

NEW YORK. BUREAU FOR HANDICAPPED CHILDREN. *Standards of care for cleft palate rehabilitation centers in hospitals.* 1953. 14 p. Mimeo. The Bureau, 125 Worth St., New York 13, N.Y.

Standards approved by the Pediatric Advisory Committee and the Dental Advisory Committee of the New York City Department of Health are outlined.

APR 20 1954
MANHATTAN
KANSAS

SCHLANGER, BERNARD B. "Speech therapy results with mentally retarded children in special classes." *Training School Bul.* Dec. 1953. 50:8:179-186.

Although the study was not statistically controlled, results showed that slow learning children can make significant gains in speech and language when the emphasis is on the individual and not the problem.

Visual Impairments

BUELL, CHARLES E. *Active games for the blind.* 1953. 73 p. School for the Blind, 3001 Derby St., Berkeley, California. 60c.

Presents a means for correcting the present inadequate physical training programs for blind school children. Describes various active games and sports that can be specially modified for use in physical education of the visually handicapped.

DAJANI, S. T. "Teaching arithmetic to blind children." *Internatl. J. for the Education of the Blind.* Dec. 1953. 3:2:223-224.

Suggests multiplying sums in one line only, rather than in the usual manner.

KAVALGIKAR, RAMACHANDRA RAO. "Education and employment of the blind and deaf-mute children." *Indian J. Social Work.* Sept. 1953. 14:2:160-167.

"...traces the development of voluntary services in India for their education and employment in the past 50 years and makes some concrete suggestions for their effective organization to meet the present day increased needs."

SCHOLL, GERALDINE. "Some notes on the use of two personality tests with visually handicapped students." *New Outlook for the Blind.* Dec. 1953. 47:10:287-295.

A method of personality testing at the Michigan School for the Blind is described; tests used were the Bell Adjustment Inventory and the Bernreuter Personality test.

General

BAKER, LOUISE. "The 'written troubles' of the handicapped should be used with discrimination to help both patient and those about him." *N.Y. State Education.* Dec. 1953. 41:3:203-205.

Personal experience books are not always presented at the proper psychological moment by those unaware of the dangers in too-early reading of success stories dealing with the handicapped.

DATES TO REMEMBER

APR. 11-15	AMERICAN PERSONNEL AND GUIDANCE ASSN, BUFFALO, N.Y.
Apr. 12-15	**Second Regional Instructional Conference. ICEC participates, Minneapolis, Minn.**
APR. 20-24	CONFERENCE OF EXECUTIVES OF AMERICAN SCHOOLS FOR THE DEAF, SANTA FE, N. MEX.
Apr. 21-24	National Council of Teachers of Mathematics, NEA, Cincinnati
Apr. 25-27	Dept. of Rural Education, NEA, Regional, St. Paul, Minn.
Apr. 28-May 1	**International Council for Exceptional Children International Convention, Cincinnati**
May 2- 4	Dept. of Rural Education, NEA, Regional, Hot Springs, Ark.
May 6- 8	Dept. of Elementary School Principals, NEA, Regional, Boston
MAY 11-13	NATIONAL ASSN OF SCHOOL SOCIAL WORKERS, ATLANTIC CITY
MAY 16-21	NATIONAL TUBERCULOSIS ASSN, ATLANTIC CITY
MAY 18-22	AMERICAN ASSN FOR MENTAL DEFICIENCY, ATLANTIC CITY
JUNE	AMERICAN ASSN OF INSTRUCTORS OF THE BLIND, BATAVIA, N.Y.
JUNE 14-18	ALEXANDER GRAHAM BELL ASSN FOR THE DEAF, ST. LOUIS
June 27-July 1	**NEA Representative Assembly, New York ICEC will have sessions here.**
June 21-25	American Medical Assn, San Francisco
JULY 4-10	AMERICAN PHYSICAL THERAPY ASSN, LOS ANGELES
AUG. 14-21	WORLD FEDERATION FOR MENTAL HEALTH, TORONTO

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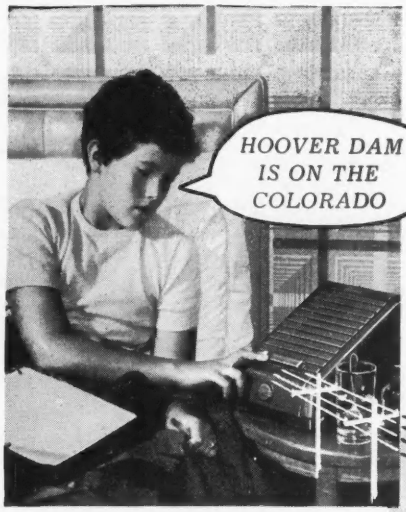

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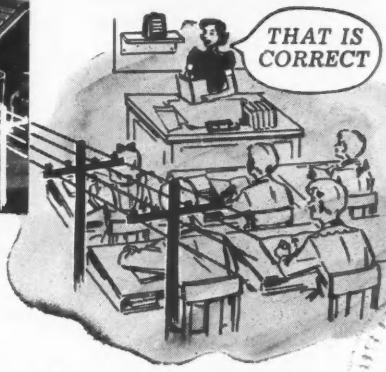

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